

REMARKS

Claims 1, 3, 21 and 35-41 are pending in the application. Claims 1, 3, 21 and 35-40 stand rejected. Claim 1 was amended and claim 41 was newly added in the response filed April 8, 2002. Claim 1 has been further amended as set forth above (the form of the amendment assumes that the amendments filed in the April 8, 2002 response have been effected). Favorable reconsideration is respectfully requested.

In the above-identified Office Action, claims 1, 35-37 and 39 were rejected under 35 USC 102(b) as being anticipated by Lohberg (U.S. Patent No. 4,828,332). In the response filed April 8, 2002 to the Office Action, the Applicant amended claim 1 and included remarks pointing out that the claimed invention was patentable over the disclosure in Lohberg. Upon further review of Lohberg, the Applicant requests that the further amendments to claim 1 set forth above be entered and that remarks pursuant thereto be considered. Also, in light of the further review of Lohberg and the further amendment to claim 1, the Applicant notes that the last two sentences on page 5, lines 16-21 of the response filed April 8, 2002 are no longer pertinent and should be disregarded.

Lohberg describes a counteracting motor 4 that generates a force opposed to a brake pedal force. The force generated by the counteracting motor may be changed by changing the programming of a microcomputer 22, thereby changing a relationship between the brake pedal force and the brake pedal travel. (See Lohberg, col. 4, lines 15-36). Thus, a relationship between the assisting drive force generated by the first control means 3 of Lohberg and the brake pedal force can be changed by changing the force generated by the counteracting motor 4. Accordingly, it should be noted that in the structures described in Lohberg, the primary drive force to be applied to the pressurizing piston is reduced by the counteracting motor 4 when the brake cylinder pressure corresponding to a certain value of the brake pedal force is reduced.

In view of the foregoing, the further amendment to claim 1 set forth above emphasizes an advantage of the present invention compared with structures described in Lohberg. The amendment to claim 1 recites " said changing means including pressure-reducing means for reducing a pressure of the fluid in said brake cylinder for a given value of said brake operating force, by reducing said assisting drive force, and

without reducing said primary drive force applied to said pressurizing piston on the basis of said brake operating force." Thus, in contrast to structures described in Lohberg, according to embodiments of the present invention as claimed, the brake cylinder pressure corresponding to a certain value of the brake pedal force can be reduced by reducing only the assisting drive force and without reducing the primary drive force.

An advantage afforded by the claimed arrangement in comparison to the structures described in Lohberg is that the claimed arrangement does not waste the vehicle operator's effort. When the brake cylinder pressure is increased or held constant in the braking system according to amended claim 1, the brake pedal force generated by the vehicle operator's effort can be effectively utilized and is assisted by the assisting drive force, so that the operator's effort is not wasted at all. On the other hand, the braking system of Lohberg suffers from wasting of the operator's effort due to the force generated by the counteracting motor 4 so as to oppose the brake pedal force. This wasting is particularly large when the brake cylinder pressure for a given value of the brake pedal force is reduced.

CONCLUSION


Attached hereto is a marked-up version of the changes made to the claim by the current amendment. The attached page is captioned "**Version of the Amended Claims Marked Up to Show Changes Made.**"

In light of the above discussion, the Applicant respectfully submits that the present application is in all aspects in allowable condition, and earnestly solicits favorable reconsideration and early issuance of a Notice of Allowance.

The Examiner is invited to contact the undersigned at (202) 220-4323 to discuss any matter concerning this application. The Office is authorized to charge any fees under 37 C.F.R. 1.16 or 1.17 related to this communication to Deposit Account No. 11-0600.

Respectfully submitted,

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Version of the Amended Claims Marked Up to Show Changes Made

1. (Thrice Amended) A hydraulically operated braking system comprising:
 - a brake operating member operable by an operator;
 - a master cylinder including a pressurizing piston operatively connected to said brake operating member and partially defining a pressurizing chamber, said pressurizing piston being moved by said brake operating member to pressurize a fluid in said pressurizing chamber;
 - a brake cylinder actuated by the pressurized fluid received from said master cylinder;
 - a sensing device for detecting a brake operating condition quantity indicative of an operating condition of said brake operating member; and
 - an assisting device for applying to said pressurizing piston an assisting drive force which is different than a primary drive force to be applied to said pressurizing piston on the basis of a brake operating force acting on said brake operating member,and wherein said assisting device comprises an assisting drive force control device electrically operable to control said assisting drive force on the basis of said brake operating condition quantity detected by said sensing device,
 - said assisting drive force control device including changing means for changing a relationship between said assisting drive force and said brake operating condition quantity, said relationship being in a normal operation of the braking system with an operation of said brake operating member,
 - said changing means including pressure-reducing means for reducing a pressure of the fluid in said brake cylinder for a given value of said brake operating force, by reducing said assisting drive force, and without reducing said primary drive force applied to said pressurizing piston on the basis of said brake operating force.